

IZ FAQs

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21st Annual Arizona Immunization Conference

April 2014

Take Out Your Cell Phone



- ❑ You will have the opportunity to text answers to questions!
- ❑ Please note: message and data rates may apply

Disclosures

- ❑ JoEllen Wolicki is a federal government employee with no financial interest or conflict with the manufacturer of any product named in this presentation
- ❑ The speaker will not discuss the off-label use of any vaccines during this presentation
- ❑ The speaker will not discuss a vaccine not currently licensed by the FDA

NIPINFO@cdc.gov

- ❑ Email service for clinicians and the general public to ask vaccine related questions
- ❑ NIPINFO staff answer on average
 - 776 emails per month
- ❑ High volume months are traditionally August, September, and October

Frequent Flyers



- ❑ Common topics from NIPINFO questions
 - Schedule: Intervals and ages
 - Indications
 - Vaccine Safety
 - Administration errors
 - Foreign vaccination history/travel



Everyday Tools

- ❑ Immunization schedules
 - Childhood immunization schedules
 - Adult immunization schedules
 - Especially the footnotes!
- ❑ Storage and handling toolkit
- ❑ General Recommendations on Immunization: Recommendations of the Advisory Committee on Immunization Practices

Figure 1. Recommended immunization schedule for persons aged 0 through 18 years — United States, 2014.

(FOR THOSE WHO FALL BEHIND OR START LATE, SEE THE CATCH-UP SCHEDULE [FIGURE 2]).

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). School entry and adolescent vaccine age groups are in bold.

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2–3 yrs	4–6 yrs	7–10 yrs	11–12 yrs	13–15 yrs	16–18 yrs
Hepatitis B ¹ (HepB)	1 st dose	2 nd dose			3 rd dose											
Rotavirus ² (RV) (2-dose series); RV5 (3-dose series)			1 st dose													
Diphtheria, tetanus, & acellular pertussis ³ (DTaP; <7 yrs)			1 st dose													
Tetanus, diphtheria, & acellular pertussis ³ (Tdap; ≥7 yrs)																
Haemophilus influenzae type b ⁴ (Hib)			1 st dose													
Pneumococcal conjugate ⁵ (PCV13)			1 st dose													
Pneumococcal polysaccharide ⁶ (PPSV23)																
Inactivated poliovirus ⁷ (IPV) (<18 yrs)			1 st dose													
Influenza ⁸ (IV, LAIV) 2 doses for some: See footnote 8																
Measles, mumps, rubella ⁹ (MMR)																
Varicella ¹⁰ (VAR)																
Hepatitis A ¹¹ (HepA)																
Human papillomavirus ¹² (HPV2: females only; HPV4: males and females)																
Meningococcal ¹³ (Hib-Men-CY3: 6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥2 mos)																

Range of recommended ages for all children

Range of recommended ages for catch-up immunization

This schedule includes recommendations in effect as of January 1, 2014. vaccine generally is preferred over separate injections of its equivalent components, available online at <http://www.cdc.gov/vaccines/hcp/VAERS> or by telephone 800-822-7262. For contraindications and precautions for vaccination, it is available from CDC.

This schedule is approved by the Advisory Committee on Immunization (http://www.aafp.org), and the American College of Obstetricians and Gynecologists.

NOTE: The above recommendations must be read also

FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind — United States, 2014.

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

Persons aged 4 months through 6 years				
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses		
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4
Hepatitis B ¹	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the final dose is 24 weeks	
Rotavirus ²	6 weeks	4 weeks	4 weeks ³	
Diphtheria, tetanus, & acellular pertussis ³	6 weeks	4 weeks		6 months
Haemophilus influenzae type b ⁴	6 weeks	4 weeks if first dose 6 wks or later; 8 wks if first dose administered before 6 wks		6 months ⁵
Pneumococcal ⁶	6 weeks	4 weeks (as final dose; no further doses needed)		
Inactivated poliovirus ⁷	6 weeks	8 weeks		
Meningococcal ¹³	6 weeks			
Measles, mumps, rubella ⁹	12 months			
Varicella ¹⁰	12 months			
Hepatitis A ¹¹	12 months			
Tetanus, diphtheria, & acellular pertussis ³	7 years ⁴			
Human papillomavirus ¹²	9 years			
Hepatitis B ¹	Birth			
Inactivated poliovirus ⁷	6 weeks			
Meningococcal ¹³	6 weeks			
Measles, mumps, rubella ⁹	12 months			
Varicella ¹⁰	12 months	3 months if person 4 weeks if person		

NOTE: The above recommendations must

Footnotes — Recommended immunization schedule for persons aged 0 through 18 years—United States, 2014

For further guidance on the use of the vaccines mentioned below, see: <http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>.

For vaccine recommendations for persons 19 years of age and older, see the adult immunization schedule.

Additional information

- For contraindications and precautions to use of a vaccine and for additional information regarding that vaccine, vaccination providers should consult the relevant ACIP statement available online at <http://www.cdc.gov/vaccines/hcp/acip-recs/index.html>.
- For purposes of calculating intervals between doses, 4 weeks = 28 days. Intervals of 4 months or greater are determined by calendar months.
- Vaccine doses administered 4 days or less before the minimum interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum interval or minimum age should not be counted as valid doses and should be repeated as age-appropriate. The repeat dose should be spaced after the invalid dose by the recommended minimum interval. For further details, see *MMWR, General Recommendations on Immunization and Reports* / Vol. 60 / No. 2; Table 1, *Recommended and minimum ages and intervals between vaccine doses* available online at <http://www.cdc.gov/mmwr/pdf/rr/r6002.pdf>.
- Information on travel vaccine requirements and recommendations is available at <http://wwwnc.cdc.gov/travel/destinations/list>.
- For vaccination of persons with primary and secondary immunodeficiencies, see Table 13, "Vaccination of persons with primary and secondary immunodeficiencies," in *General Recommendations on Immunization (ACIP)*, available at <http://www.cdc.gov/mmwr/pdf/rr/r6002.pdf>; and American Academy of Pediatrics. *Immunization in Special Clinical Circumstances*, in Pickering LK, Baker CJ, Kimberlin DW, Long SS eds. *Red Book: 2012 report of the Committee on Infectious Diseases*. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics.

1. Hepatitis B (HepB) vaccine. (Minimum age: birth)

Routine vaccination:

At birth:

- Administer monovalent HepB vaccine to all newborns before hospital discharge.
- For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after completion of the HepB series, at age 9 through 18 months (preferably at the next well-child visit).
- If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine regardless of birth weight. For infants weighing less than 2,000 grams, administer HBIG in addition to HepB vaccine within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if mother is HBsAg positive, also administer HBIG for infants weighing 2,000 grams or more as soon as possible, but no later than age 7 days.

Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1 to 2 months, and 6 months starting as soon as feasible. See Figure 2.
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks), administer the third dose at least 16 weeks after the second dose AND at least 16 weeks after the first dose. The final (third or fourth) dose in the HepB vaccine series should be administered no earlier than age 24 weeks.

- Administration of a total of 4 doses of HepB vaccine is permitted when a combination vaccine containing HepB is administered after the birth dose.

Catch-up vaccination:

- Unvaccinated persons should complete a 3-dose series.
- A 2-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
- For other catch-up guidance, see Figure 2.

2. Rotavirus (RV) vaccines. (Minimum age: 6 weeks for both RV1 (Rotarix) and RV5 (RotaTeq))

Routine vaccination:

Administer a series of RV vaccine to all infants as follows:

- If Rotarix is used, administer a 2-dose series at 2 and 4 months of age.
- If RotaTeq is used, administer a 3-dose series at ages 2, 4, and 6 months.
- If any dose in the series was RotaTeq or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be administered.

Catch-up vaccination:

- The maximum age for the first dose in the series is 14 weeks, 6 days; vaccination should not be initiated for infants aged 15 weeks, 0 days or older.
- The maximum age for the final dose in the series is 8 months, 0 days.
- For other catch-up guidance, see Figure 2.

3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. (Minimum age: 6 weeks. Exception: DTaP-IPV (Kinrix): 4 years)

Routine vaccination:

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15 through 18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.

Catch-up vaccination:

- The fifth dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.
- For other catch-up guidance, see Figure 2.

4. Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 10 years for Boostrix; 11 years for Adacel)

Routine vaccination:

- Administer 1 dose of Tdap vaccine to all adolescents aged 11 through 12 years.
- Tdap may be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Administer 1 dose of Tdap vaccine to pregnant adolescents during each pregnancy (preferred during 27 through 36 weeks gestation) regardless of time since prior Td or Tdap vaccination.

Catch-up vaccination:

- Persons aged 7 years and older who are not fully immunized with DTaP vaccine should receive Tdap vaccine as 1 (preferably the first) dose in the catch-up series; if additional doses are needed, use Td vaccine. For children 7 through 10 years who receive a dose of Tdap as part of the catch-up series, an adolescent Tdap vaccine dose at age 11 through 12 years should NOT be administered. It should be administered instead 10 years after the Tdap dose.
- Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose followed by tetanus and diphtheria toxoids (Td) booster doses every 10 years thereafter.
- Inadvertent doses of DTaP vaccine:
 - If administered inadvertently to a child aged 7 through 10 years may count as part of the catch-up series. This dose may count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11 through 12 years.
 - If administered inadvertently to an adolescent aged 11 through 18 years, the dose should be counted as the adolescent Tdap booster.

For other catch-up guidance, see Figure 2.

5. Haemophilus influenzae type b (Hib) conjugate vaccine. (Minimum age: 6 weeks for PRP-T [ACTHIB, DTaP-IPV/Hib (Pentacel) and Hib-MenCY (MenHibrix)], PRP-OMP (PedvaxHB or COMVAX), 12 months for PRP-T [Hiberix])

Routine vaccination:

- Administer a 2- or 3-dose Hib vaccine primary series and a booster dose (dose 3 or 4 depending on vaccine used in primary series) at age 12 through 15 months to complete a full Hib vaccine series.
- The primary series with ACTHIB, MenHibrix, or Pentacel consists of 3 doses and should be administered at 2, 4, and 6 months of age. The primary series with PedvaxHB or COMVAX consists of 2 doses and should be administered at 2 and 4 months of age; a dose at age 6 months is not indicated.
- One booster dose (dose 3 or 4 depending on vaccine used in primary series) of any Hib vaccine should be administered at age 12 through 15 months. An exception is Hiberix vaccine. Hiberix should only be used for the booster (final) dose in children aged 12 months through 4 years who have received at least 1 prior dose of Hib-containing vaccine.




<http://www.cdc.gov/vaccines/schedules/hcp/index.html>

Note: These recommendations must be read with the footnotes that follow containing number of doses, intervals between doses, and other important information.

VACCINE ▼	AGE GROUP ►	19-21 years	22-26 years	27-49 years	50-59 years	60-64 years	≥ 65 years
Influenza ^{3,*}		1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap) ^{3,*}		Substitute					
Varicella ^{4,*}							
Human papillomavirus (HPV) Female ^{5,*}		3 doses					
Human papillomavirus (HPV) Male ^{5,*}		3 doses					
Zoster ⁶							
Measles, mumps, rubella (MMR) ^{7,*}		1					
Pneumococcal 13-valent conjugate (PCV13) ^{8,*}							
Pneumococcal polysaccharide (PPSV23) ^{9,10}							
Meningococcal ^{11,*}							
Hepatitis A ^{12,*}							
Hepatitis B ^{13,*}							
<i>Haemophilus influenzae</i> type b (Hib) ^{14,*}							

Figure 2. Vaccines that might be indicated for adults based on medical and

VACCINE ▼	INDICATION ►	Pregnancy	Immuno-compromising conditions (excluding human immunodeficiency virus [HIV]) ^{4,6,7,8,15}	HIV infection CD4+ T lymphocyte count ^{4,6,7,8,15}	Men who have sex with men (MSM)
Influenza ^{3,*}			1 dose HIV annually	< 200 cells/μL	≥ 200 cells/μL
Tetanus, diphtheria, pertussis (Td/Tdap) ^{3,*}		1 dose Tdap each pregnancy	Substitute 1-time dose		
Varicella ^{4,*}		Contraindicated			
Human papillomavirus (HPV) Female ^{5,*}			3 doses through age 26 yrs		
Human papillomavirus (HPV) Male ^{5,*}			3 doses through age 26 yrs		
Zoster ⁶		Contraindicated			
Measles, mumps, rubella (MMR) ^{7,*}		Contraindicated			
Pneumococcal 13-valent conjugate (PCV13) ^{8,*}					
Pneumococcal polysaccharide (PPSV23) ^{9,10}					

	For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster
	Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indication)
	No recommendation

Additional information about the vaccine is available at cdc.gov/vaccines or from the CDC-INFO helpline at 1-800-232-6222, Monday - Friday, excluding holidays.

Use of trade names and commercial products is not intended to endorse or criticize specific products or Human Services.

The recommendations in this schedule
Immunization Practices (ACIP), the An
Obstetricians and Gynecologists (ACOG)

VACCINE ▼	INDICATION ►	Pregnancy	Immuno-compromising conditions (excluding human immunodeficiency virus [HIV]) ^{6,7,8,15}	HIV Infection CD4+ T lymphocyte count ^{6,7,8,15}	Men who have sex with men (MSM)	Kidney failure, end-stage renal disease, receipt of hemodialysis	Heart disease, chronic lung disease, chronic alcoholism	Asplenia (including elective splenectomy and persistent complement component deficiencies) ^{8,14}	Chronic liver disease	Diabetes	Healthcare personnel
Influenza ^{2,7}			1 dose IIV annually	< 200 cells/ μ L	\geq 200 cells/ μ L	1 dose IIV or LAIV annually	1 dose IIV annually				1 dose IIV or LAIV annually
Tetanus, diphtheria, pertussis (Td/Tdap) ^{3,7}		1 dose Tdap each pregnancy	Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs								
Varicella ^{4,7}			Contraindicated				2 doses				
Human papillomavirus (HPV) Female ^{5,7}			3 doses through age 26 yrs				3 doses through age 26 yrs				
Human papillomavirus (HPV) Male ^{5,7}			3 doses through age 26 yrs				3 doses through age 21 yrs				
Zoster ⁶			Contraindicated				1 dose				
Measles, mumps, rubella (MMR) ^{7,7}			Contraindicated				1 or 2 doses				
Pneumococcal 13-valent conjugate (PCV13) ^{8,7}							1 dose				
Pneumococcal polysaccharide (PPSV23) ^{9,10}							1 or 2 doses				
Meningococcal ^{11,7}							1 or more doses				
Hepatitis A ^{12,7}							2 doses				
Hepatitis B ^{13,7}							3 doses				
<i>Haemophilus influenzae</i> type b (Hib) ^{14,7}			post-HSCT recipients only				1 or 3 doses				

☐ For all persons in this category who meet the age requirements and who lack documentation of vaccination or have no evidence of previous infection; zoster vaccine recommended regardless of prior episode of zoster

☒ Recommended if some other risk factor is present (e.g., on the basis of medical, occupational, lifestyle, or other indications)

☐ No recommendation

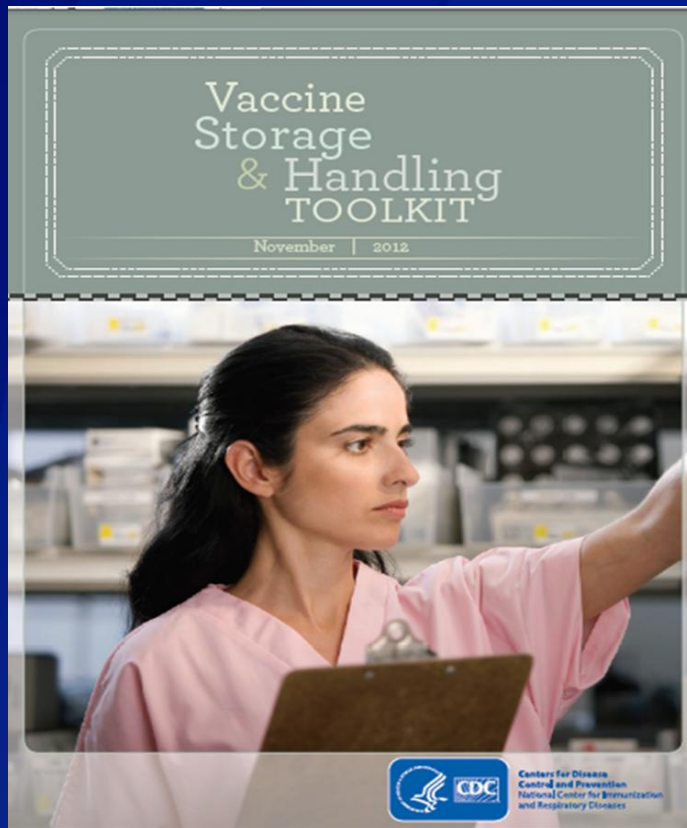
These schedules indicate the recommended age groups and medical indications for which administration of currently licensed vaccines is commonly indicated for adults ages 19 years and older, as of February 1, 2014. For all vaccines being recommended on the Adult Immunization Schedule, Vaccine Schedules are listed by type of vaccine, by age group, and by the time that has elapsed since the last dose. Licensed combination vaccines may be used if any of the components of the combination are indicated and when the vaccine's other components are not contraindicated. For detailed recommendations on all vaccines, including those used primarily for travelers or that are issued during the year, consult the manufacturers' package inserts and the complete statements for each vaccine's package insert. For more information, visit www.hhs.gov/asdhp/h/immunization/adultandelderly/ or www.cdc.gov/vaccines/imz/adult/vaccine-list.htm. Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.



**U.S. Department of
Health and Human Services**
Centers for Disease
Control and Prevention



Stay up-to-date! Keep the ACIP immunization schedules on your computer or website. Directions on how to “syndicate” the schedules on the CDC website!



VACCINE STORAGE AND HANDLING

<http://www.cdc.gov/vaccines/recs/storage/default.htm>

Vaccine Storage and Handling Toolkit

- ❑ Contents are based on the:
 - Recommendations of the Advisory Committee on Immunization Practices (ACIP),
 - Manufacturer's product information, and
 - Studies from the National Institute for Scientific Technology (NIST)
- ❑ The toolkit outlines best practice strategies and recommendations on:
 - Equipment considerations for storage units and thermometers
 - Maintaining the cold chain
 - Routine storage and handling practices
 - Inventory management
 - Emergency procedures for protecting vaccine inventories



Staff who handle vaccines should be knowledgeable on proper vaccine storage and handling and best practices.

Vaccine Storage & Handling Web-based Training Continuing Education Offered

Vaccines & Immunizations

[Vaccines Home](#) > [Education & Training](#) > [Immunization Courses](#) > You Call The Shots

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Education & Training:


You Call The Shots


Web-based Training Course


At a glance: _____


This product was developed through the Project to Enhance Immunization Content in Nursing Education and Training, which is supported by funding from the National Center for Immunization and Respiratory Diseases (NCIRD) of the Centers for Disease Control and Prevention (CDC), through a Cooperative Agreement with the [Association for Prevention Teaching and Research](#).




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www.cdc.gov/vaccines/ed/youcalltheshots.htm



Use standardized training programs for staff trainings. Web-based programs are a great way to do this.

Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

Recommendations and Reports / Vol. 60 / No. 2

January 28, 2011

General Recommendations on Immunization

Recommendations of the Advisory Committee
on Immunization Practices (ACIP)



Continuing Education Examination available at <http://www.cdc.gov/mmwr/cme/conted.html>



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

<http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf>

General Recommendations on Immunization

- ❑ Provides guidance on vaccination issues common to more than one vaccine
- ❑ Revised on an ad hoc basis, generally every 3-5 years
- ❑ First published by ACIP in 1976
- ❑ Eighth revision published in 2011



Bookmark websites for reliable information in the web browser of your computer for staff to use. Including ACIP General Recommendations and vaccine specific ACIP recommendations.

General Recommendations on Immunization

- ❑ Contents include:
 - Timing and spacing of vaccines
 - Contraindications and precautions
 - Vaccine administration
 - Vaccine storage and handling
 - Altered immunocompetence
 - Vaccination records
 - Reporting adverse events
 - Vaccine information sources
 - Special situations

MMWR 2011;60(RR-2)

General Recommendations on Immunization

- ❑ Special situations:
 - Concurrent antibiotics and vaccines
 - Allergy to vaccine components
 - Latex allergy
 - Vaccination of premature infants
 - Vaccination during pregnancy
 - Breast feeding and vaccination
 - Persons vaccinated outside the U.S. including internationally adopted children

What Do You Think?



Q: We have a patient with only one documented dose of HPV vaccine administered 3 years ago. Do we need to start the series over?

- Yes
- No

Extended Interval Between Doses

- ❑ It is not necessary to restart the series or add doses because of an extended interval between doses
- ❑ Not all permutations of all schedules for all vaccines have been studied
- ❑ Available studies of extended intervals have shown no significant difference in final titer



Send reminder and recall messages to patients for needed vaccines.

MMWR 2011;60(RR-2)

Minimum Ages and Intervals

- ❑ Vaccine doses should not be administered at intervals less than the minimum intervals or earlier than the minimum age
- ❑ ACIP recommends that vaccine doses given up to 4 days before the minimum interval or age be counted as valid
 - AKA 4 Day Grace
- ❑ Doses administered 5 or more days before the minimum age or interval should be repeated



Use ASIIS to assess for needed vaccines. It is great way to be sure minimum ages and intervals are met!

MMWR 2011;60(RR-2)

What Do You Think?



- ❑ We administered MMR by intramuscular injection instead of subcutaneously. Does the dose need to be repeated?
 - Yes
 - No

Wrong Route Errors

- ❑ Vaccines which should be administered by subcutaneous injection (subcut) given by intramuscularly
 - Do not repeat
- ❑ IM vaccines given by subcut injection
 - Repeat if hepatitis B, HPV or rabies
- ❑ Oral or intranasal vaccines (RV, LAIV) vaccines given IM or Subcut (!!)
 - Always repeat

MMWR 2011;60(No. RR-2)

Rotavirus (RV) Vaccine Administration Errors, United States, 2006-2013

- ❑ 66 reports of RV vaccine administration errors to Vaccine Adverse Event Reporting System (VAERS)
 - 39 reports of injecting RV vaccine (RV1: 33; RV5: 6)
 - 19 of 39 reports (49%) documented an adverse event
 - Irritability (7) and injection site redness (5) most common
 - 27 reports of eye splashes
 - 21 cases: infants coughed, sneezed, or spit vaccine into the eyes of vaccination providers (17), parents, (1) or themselves (3)
 - 21/27 reported non-serious adverse events-minor eye irritation

Types of Vaccine Administration Errors

- ❑ Administering incorrectly stored vaccines
- ❑ Timing- minimum interval/age violations
- ❑ Expired vaccine or diluent used
- ❑ Wrong vaccine formulation
- ❑ Wrong route
- ❑ Preparation errors
- ❑ Wrong dosage or volume administered



Review expiration dates of vaccines and diluents in your inventory at least weekly. Removed expired vaccine and diluent IMMEDIATELY!

Vaccines

❑ Vaccines most frequently associated with errors include:

- Influenza
- Hib
- DTaP-IPV
- Tdap
- DTaP
- HepA
- HepB
- HPV
- Zoster
- MMRV



Label where each vaccine is stored in the unit. Do not store look-or sound-alike vaccines next to each other.

Make the Easy Thing To Do, the Right Thing To Do

- ❑ Implement proven medication safety practices to prevent medication errors, including:
 - Reducing reliance on memory
 - Standardization
 - Protocols and checklists
 - Differentiating among products to eliminate look- and sound-alike products
 - Monitoring error frequencies and correct system problems associated with errors

Preventing Medication Errors: Quality Chasm Series Institute of Medicine
To Err is Human: Building a Safer Health System

Knowledgeable Staff is Key

- ❑ Ensure all staff are adequately trained PRIOR to administering vaccines
- ❑ Develop a standardized policy for competency-based education for
 - New and temporary staff
 - Ongoing training for permanent staff



Template for Skills Checklist for Immunizations is available from the Immunization Action Coalition (IAC)

What Do You Think?



- ❑ We gave DTaP-IPV (Kinrix) to a 6 month old for dose 3 of DTaP and IPV. Should we bring the child back and repeat DTaP and IPV?
 - Yes
 - No



Thinking Through Using A Combination Vaccine

1

- Assess the patient's immunization history

2.

- Review the current age-appropriate immunization schedule

3.

- Screen for contraindications and precautions

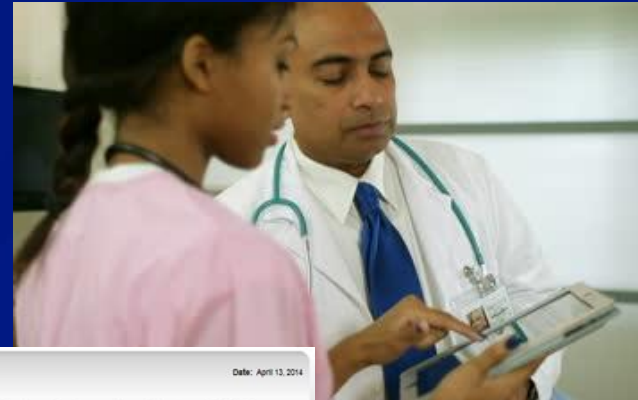
4.

- Evaluate combination vaccines based on components and product indications

Appropriate Combination Vaccine Product

1

• Assess the patient's immunization history



Arizona Department of Health Services

Version: 5.12.11.4

STC

Date: April 13, 2014

Welcome to the Arizona State Immunization Information System (ASIS) Web Application

ANNOUNCEMENTS:

****ATTENTION VFC PROVIDERS****

Please click [HERE](#) to access the 2014 VFC Enrollment Documents. For providers re-enrolling into the VFC program, these documents must be returned to the Arizona Immunization Program Office, no later than May 7, 2014. Thank you for immunizing Arizona's children.

Pentacel® is now available in limited supply. Please replace some doses with single antigen vaccines or another combination vaccine.

ATTENTION PROVIDERS: If you have any questions regarding vaccine dosing and recommendations please click [here](#) for access to the Epidemiology and Prevention of Vaccine-Preventable Diseases CDC Pink Book 12th Edition.

Are you interested in developing an interface between your EHR and ASIS? Click [here](#) for more information.

Notice: Please fax your temperature logs before you submit your VOMS order.



~~Only accept written, dated records as evidence of vaccination. Only self-reported doses of influenza vaccine and PPSV are acceptable~~

2.

• Review the current age-appropriate immunization schedule

Figure 1. Recommended immunization schedule for persons aged 0 through 18 years – United States, 2014.

(FOR THOSE WHO FALL BEHIND OR START LATE, SEE THE CATCH-UP SCHEDULE (FIGURE 2)).

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). School entry and adolescent vaccine age groups are in bold.

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2–3 yrs	4–6 yrs	7–10 yrs	11–12 yrs	13–15 yrs	16–18 yrs
Hepatitis B ¹ (HepB)	1 st dose		2 nd dose		3 rd dose											
Rotavirus ² (RV) (2-dose series); RV5 (3-dose series)			1 st dose	2 nd dose	See footnote 2											
Diphtheria, tetanus, & acellular pertussis (DTaP) (<7 yrs)			1 st dose	2 nd dose	3 rd dose				4 th dose							
Tetanus, diphtheria, & acellular pertussis (Tdap) (>7 yrs)																
Haemophilus influenzae type b ³ (Hib)			1 st dose	2 nd dose	See footnote 3		3 rd or 4 th dose									
Pneumococcal conjugate ⁴ (PCV13)			1 st dose	2 nd dose	3 rd dose		4 th dose									
Pneumococcal polysaccharide (PPSV23)																
Inactivated poliovirus ⁵ (IPV) (18 yrs)			1 st dose	2 nd dose	3 rd dose											
Influenza ⁶ (IV, LAIV) 2 doses for some See footnote 8																
Measles, mumps, rubella ⁷ (MMR)								1 st dose								
Varicella ⁸ (VAR)								1 st dose								
Hepatitis A ⁹ (HepA)									2 nd dose series, See for							
Human papillomavirus ¹⁰ (HPV) females only; HPV4: males and females																
Meningococcal ¹¹ (Hib-Men-CY) > 6 weeks; MenACWY-D > 9 mos; MenACWY-CRM > 2 mos																

This schedule includes recommendations in effect as of January 1, 2014. Any dose not administered at the recommended age should be a vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the recommendations, available online at <http://www.cdc.gov/vaccines/imz/downloads.html>. Clinically significant adverse events that to VAERS online (<http://www.vaers.hhs.gov>) or by telephone (800-822-7967). Suspected cases of vaccine-preventable diseases should be reported to state and local health departments. This schedule is approved by the Advisory Committee on Immunization Practices (<http://www.cdc.gov/vaccines/imz/downloads.html>), the American Academy of Pediatrics (<http://www.aap.org>), and the American College of Obstetricians and Gynecologists (<http://www.acog.org>).

NOTE: The above recommendations must be read along with the footnotes of this schedule.

FIGURE 2. Catch-up immunization schedule for persons aged 4 months through 18 years who start late or who are more than 1 month behind — United States, 2014.

The figure below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Figure 1 and the footnotes that follow.

Persons aged 4 months through 5 years ¹					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to dose 2	Dose 2 to dose 3	Dose 3 to dose 4	Dose 4 to dose 5
Hepatitis B ¹	Birth	4 weeks	8 weeks and at least 16 weeks after first dose; minimum age for the first dose is 24 weeks		
Rotavirus ²	6 weeks	4 weeks	4 weeks ²		
Diphtheria, tetanus, & acellular pertussis ³	6 weeks	4 weeks	4 weeks	6 months	6 months ³
Haemophilus influenzae type b ⁴	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose) if first dose administered at age 12 through 14 months No further doses needed if first dose administered at age 15 months or older	4 weeks ⁵ if current age is younger than 12 months and first dose administered at < 7 months old 8 weeks and age 12 months through 58 months (as final dose) if current age is younger than 12 months and first dose administered between 7 through 11 months regardless of risk 8 weeks (as final dose) if current age is 12 through 58 months and first dose administered at younger than age 12 months OR first 2 doses were PRP-CRM ⁶ and administered at younger than 12 months No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 through 58 months who received 3 (PRP-T) doses before age 12 months and started the primary series before age 7 months	
Pneumococcal ⁷	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks if current age is younger than 12 months 8 weeks (as final dose for healthy children) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 through 58 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Inactivated poliovirus ⁸	8 weeks	4 weeks	4 weeks ⁹		
Meningococcal ¹¹	8 weeks	8 weeks ¹²	See footnote 13	6 months ¹³ minimum age 4 years for final dose	See footnote 13
Measles, mumps, rubella ⁷	12 months	4 weeks			
Varicella ⁸	12 months	3 months			
Hepatitis A ⁹	12 months	6 months			

Persons aged 7 through 18 years					
Tetanus, diphtheria, & acellular pertussis ³	7 years ²	4 weeks	4 weeks if first dose of DTaP/DT administered at younger than age 12 months 6 months if first dose of DTaP/DT administered at age 12 months or older and no further doses needed for catch-up	6 months if first dose of DTaP/DT administered at younger than age 12 months	
Human papillomavirus ¹⁰	9 years		Routine dosing intervals are recommended ¹¹		
Hepatitis B ¹	12 months	6 months			
Hepatitis A ⁹	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)		
Inactivated poliovirus ⁸	6 weeks	4 weeks	4 weeks ¹²	6 months ¹³	
Meningococcal ¹¹	6 weeks	8 weeks ¹²			
Measles, mumps, rubella ⁷	12 months	4 weeks			
Varicella ⁸	12 months	3 months if person is younger than age 13 years 4 weeks if person is aged 13 years or older			

NOTE: The above recommendations must be read along with the footnotes of this schedule.

Use the Catch-up schedule for children who are behind for needed vaccines. Once caught-up, return to the routine schedule.

MMWR 2011;60(RR-2)

- **Screen for contraindications and precautions**

[illegible]

www.immunize.org/catg.d/p4060.pdf



Screen for contraindications using a standardized screening tool every time you plan to administer vaccines.

4.

- Evaluate combination vaccines based on components and product indications

ACIP Abbrev.	Age Indications	Includes	Can Be Used For:
DTaP-IPV-HepB Pediarix	6 weeks through 6 years of age	DTaP	Doses 1 through 3 in the DTaP series
		IPV	Doses 1 through 3 in the IPV series
		Hep B	Any dose in the HepB series except the birth dose
DTaP-IPV Kinrix	4 through 6 years of age	DTaP	Dose 5 in the DTaP series
		IPV	Dose 4 in the IPV series

Use of Combination Vaccines and Extra Doses of Vaccine Antigens

- Using combination vaccines containing certain antigens not indicated at the time of administration to a patient might be justified when:
 - The extra antigen is not contraindicated
 - Products that contain only the needed antigens are not readily available
 - Potential benefits to the patient outweigh the potential risk for adverse events associated with the extra antigens

What Do You Think?



Q: We have a question about hepatitis A and Twinrix. Can we use Twinrix for dose #1, hepatitis B vaccinen alone for dose #2 and Twinrix again for dose #3?

- Yes
- No

Twinrix (HepA-HepB)

- ❑ Combination hepatitis A and hepatitis B vaccines
 - Standard adult dose of hepatitis B vaccine
 - Pediatric dose of hepatitis A vaccine
- ❑ Approved for persons 18 years of age and older
- ❑ Schedule: 0, 1, 6 months
 - Alternate schedule – 4 doses
 - 0, 7, 21 through 30 days and a booster dose 12 months
- ❑ IM injection

Mixed Product Schedules

Any combination of 3
doses of adult HepB or
3 doses of Twinrix



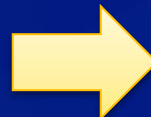
Complete series of
hepatitis B vaccine

1 dose of Twinrix +
2 doses of adult hepA



Complete series of
hepatitis A vaccine

2 doses of Twinrix +
1 dose of adult hepA



Complete series of
hepatitis A vaccine



Maintain spacing intervals that are recommended for
Twinrix.

What Do You Think?



- ❑ We misplaced some Acthib diluent.
But we have lots of MMR diluent.
Can we use MMR diluent to
reconstitute Acthib vaccine?
 - Yes
 - No

Diluents and Vaccines

- ❑ Only use the diluent supplied by the vaccine manufacturer to reconstitute the vaccine
- ❑ All diluents are NOT the same

Product Name	Lyophilized vaccine	Liquid diluent
Acthib	Hib	0.4% sodium chloride
MMR	M-M-R II (MMR)	Sterile water

Vaccines with Diluents: How to Use Them

Be sure to reconstitute the following vaccines correctly before administering them! Reconstitution means that the lyophilized (freeze-dried) vaccine powder or wafer in one vial must be reconstituted (mixed) with the diluent (liquid) in another.

- Only use the diluent provided by the manufacturer for that vaccine as indicated on the chart.
- ALWAYS check the expiration date on the diluent and vaccine. NEVER use expired diluent or vaccine.

Vaccine product name	Manufacturer	Lyophilized vaccine (powder)	Liquid diluent (may contain vaccine)	Time allowed between reconstitution and use ²	Diluent storage environment
ActHIB (Hib)	sanofi pasteur	Hib	0.4% sodium chloride	24 hrs	Refrigerator
Hiberix (Hib)	GlaxoSmithKline	Hib	0.9% sodium chloride	24 hrs	Refrigerator or room temp
Imovax (RAB _{hdcv})	sanofi pasteur	Rabies virus	Sterile water	Immediately ¹	Refrigerator
M-M-R II (MMR)	Merck	MMR	Sterile water	8 hrs	Refrigerator or room temp
MenHibrix (Hib-MenCY)	GlaxoSmithKline	Hib-MenCY	0.9% sodium chloride	Immediately ¹	Refrigerator or room temp
Menomune (MPSV4)	sanofi pasteur	MPSV4	Distilled water	30 min (single-dose vial) 35 days (multidose vial)	Refrigerator
Menveo (MCV4)	Novartis	MenA	MenCWY	8 hrs	Refrigerator
Pentacel (DTaP-IPV/Hib)	sanofi pasteur	Hib	DTaP-IPV	Immediately ¹	Refrigerator
ProQuad (MMRV)	Merck	MMRV	Sterile water	30 min	Refrigerator or room temp
RabAvert (RAB _{hccv})	Novartis	Rabies virus	Sterile water	Immediately ¹	Refrigerator
Rotarix (RV1) ³	GlaxoSmithKline	RV1	Sterile water, calcium carbonate, and xanthan	24 hrs	Room temp
Varivax (VAR)	Merck	VAR	Sterile water	30 min	Refrigerator or room temp
YF-VAX (YF)	sanofi pasteur	YF	0.9% sodium chloride	60 min	Refrigerator or room temp
Zostavax (HZV)	Merck	HZV	Sterile water	30 min	Refrigerator or room temp

Always refer to package inserts for detailed instructions on reconstituting specific vaccines. In general, follow the steps below.

- For single-dose vaccine products (exceptions are Menomune in the multi-dose vial and Rotarix³), select a syringe and a needle of proper length to be used for both reconstitution and administration of the vaccine. Following reconstitution, Menomune in a multidose vial will require a new needle and syringe for each dose of vaccine to be administered. For Rotarix, see the package insert.³
- Before reconstituting, check labels on both the lyophilized vaccine vial and the diluent to verify that
 - they are the correct two products to mix together,
 - the diluent is the correct volume (especially for Menomune in the multidose vial), and
 - neither the vaccine nor the diluent has expired.
- Reconstitute (i.e., mix) vaccine *just prior to use* by
 - removing the protective caps and wiping each stopper with an alcohol swab,
 - inserting needle of syringe into diluent vial and withdrawing entire contents, and
 - injecting diluent into lyophilized vaccine vial and rotating or agitating to thoroughly dissolve the lyophilized powder.
- Check the appearance of the reconstituted vaccine.
 - Reconstituted vaccine may be used if the color and appearance match the description on the package insert.
 - If there is discoloration, extraneous particulate matter, obvious lack of resuspension, or the vaccine cannot be thoroughly mixed, mark the vial as "DO NOT USE," return it to proper storage conditions, and contact your state or local health department immunization program or the vaccine manufacturer.
- If reconstituted vaccine is not used immediately or comes in a multidose vial (i.e., multi-dose Menomune), be sure to
 - clearly mark the vial with the date and time the vaccine was reconstituted,
 - maintain the product at 35°–46°F (2°–8°C); do not freeze, and
 - use only within the time indicated on chart above.

¹ If the reconstituted vaccine is not used within this time period, it must be discarded.

² For purposes of this guidance, "immediately" is defined as within 30 minutes or less.

³ Rotarix vaccine is administered by mouth using the applicator that contains the diluent. It is not administered as an injection.

Technical content reviewed by the Centers for Disease Control and Prevention

IMMUNIZATION ACTION COALITION

St. Paul, Minnesota • 651-647-9009 • www.vaccineinformation.org • www.immunize.org

www.immunize.org/catg.d/p3040.pdf • Item #P3040 (1/14)

<http://www.immunize.org/catg.d/p3040.pdf>

★ Posted job aids help staff – Make the right thing to do, the easy thing to do!

What Do You Think?



Q: We have a 65 year old patient who needs zoster vaccine. She received a blood transfusion 2 weeks ago. Can we administer zoster vaccine today?

1. Yes
2. No

Antibody Containing Products and Live Vaccines

General Rule

- ❑ Inactivated vaccines are generally not affected by circulating antibody to the antigen
- ❑ Live attenuated vaccines may be affected by circulating antibody

Exceptions to the General Rule

- ❑ Antibody/vaccine spacing recommendations apply specifically to MMR and varicella-containing vaccines
- ❑ Does NOT apply to
 - zoster vaccine (large amount of virus in the vaccine)
 - yellow fever, oral typhoid (negligible antibody in the U.S. blood supply)
 - LAIV (viruses change annually)
 - rotavirus (replication in GI tract)

Table 5: Interval between antibody-containing products and measles- and varicella-containing vaccines

TABLE 5. Recommended intervals between administration of antibody-containing products and measles- or varicella-containing vaccine, by product and indication for vaccination

Product/Indication	Dose (mg IgG/kg) and route*	Recommended interval before measles- or varicella-containing vaccine† administration (months)
Tetanus IG	250 units (10 mg IgG/kg) IM	3
Hepatitis A IG		
Contact prophylaxis	0.02 mL/kg (3.3 mg IgG/kg) IM	3
International travel	0.06 mL/kg (10 mg IgG/kg) IM	3
Hepatitis B IG	0.06 mL/kg (10 mg IgG/kg) IM	3
Rabies IG	20 IU/kg (22 mg IgG/kg) IM	4
Varicella IG	125 units/10 kg (60–200 mg IgG/kg) IM, maximum 625 units	5
Measles prophylaxis IG		
Standard (i.e., nonimmunocompromised) contact	0.25 mL/kg (40 mg IgG/kg) IM	5
Immunocompromised contact	0.50 mL/kg (80 mg IgG/kg) IM	6
Blood transfusion		
RBCs, washed	10 mL/kg, negligible IgG/kg IV	None
RBCs, adenine-saline added	10 mL/kg (10 mg IgG/kg) IV	3
Packed RBCs (hematocrit 65%) [§]	10 mL/kg (60 mg IgG/kg) IV	6
Whole blood (hematocrit 35%–50%) [§]	10 mL/kg (80–100 mg IgG/kg) IV	6
Plasma/platelet products	10 mL/kg (160 mg IgG/kg) IV	7
Cytomegalovirus IGIV	150 mg/kg maximum	6
IGIV		
Replacement therapy for immune deficiencies [¶]	300–400 mg/kg IV [¶]	8
Immune thrombocytopenic purpura treatment	400 mg/kg IV	8
Postexposure varicella prophylaxis**	400 mg/kg IV	8
Immune thrombocytopenic purpura treatment	1000 mg/kg IV	10
Kawasaki disease	2 g/kg IV	11
Monoclonal antibody to respiratory syncytial virus F protein (Synagis [MedImmune])^{††}	15 mg/kg IM	None



What Do You Think?

- ❑ We have 7 year old who was recently adopted from Bosnia. Her immunization record is:
 - Detepe
 - Dječja paralyze
 - Žutica
 - Gripia
- ❑ First I have no idea what they are and if I could figure it out would they count?

Foreign Immunization History

- ❑ Adopted children's birth countries often have vaccination schedules that differ from the U.S. immunization schedule
- ❑ Differences include the vaccines administered, the recommended ages, number and timing of the doses
 - Detepe = DPT
 - Gripa = Influenza
 - Dječja paraliza = Polio
 - Žutica = HepA



Appendix B in the Pink Book includes resources for determining vaccines administered in foreign countries

Revised January 2012

See back for immunization tool protocol and translation of common terms



Bookmark on your web browser immunization resources consistently by you and other staff

Determining What to Do Next

- ❑ Healthcare providers may
 - Repeat the vaccinations- safe and prevents the need for serologic testing
 - Judicious use of serologic testing may avoid unnecessary injections
 - But for most vaccines, the many serologic tests cannot document protection against infection
 - Cost can be a factor, too

General Recommendations Table 14

TABLE 14. Approaches to evaluation and vaccination of persons vaccinated outside the United States who have no (or questionable) vaccination records

Vaccine	Recommended approach	Alternative approach*
MMR	Revaccination with MMR	Serologic testing for IgG antibodies to measles, mumps, and rubella
Hib	Age-appropriate revaccination	—
Hepatitis A	Age-appropriate revaccination	Serologic testing for IgG antibodies to hepatitis A
Hepatitis B	Age-appropriate revaccination and serologic testing for HBsAg†	—
Poliovirus	Revaccination with inactivated poliovirus vaccine	Serologic testing for neutralizing antibody to poliovirus types 1, 2, and 3 (limited availability)
DTaP	Revaccination with DTaP, with serologic testing for specific IgG antibody to tetanus and diphtheria toxins in the event of a severe local reaction	Persons whose records indicate receipt of ≥3 doses: serologic testing for specific IgG antibody to diphtheria and tetanus toxins before administering additional doses (see text), or administer a single booster dose of DTaP, followed by serologic testing after 1 month for specific IgG antibody to diphtheria and tetanus toxins with revaccination as appropriate (see text)
Tdap	Age-appropriate vaccination of persons who are candidates for Tdap vaccine on the basis of time since last diphtheria and tetanus-toxoid-containing vaccines.	—
Varicella	Age-appropriate vaccination of persons who lack evidence of varicella immunity	—
Pneumococcal conjugate	Age-appropriate vaccination	—
Rotavirus	Age-appropriate vaccination	—
HPV	Age-appropriate vaccination	—
Zoster	Age-appropriate vaccination	—

Abbreviations: DTaP = diphtheria and tetanus toxoids and acellular pertussis; HBsAg = hepatitis B surface antigen; Hib = *Haemophilus influenzae* type b; HPV = human papillomavirus; IgG = immune globulin G; MMR = measles, mumps, and rubella; Tdap = tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis.

* There is a recommended approach for all vaccines and an alternative approach for some vaccines.

† In rare instances, hepatitis B vaccine can give a false-positive HBsAg result up to 18 days after vaccination; therefore, blood should be drawn to test for HBsAg before vaccinating (Source: CDC. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States: recommendations of the Advisory Committee on Immunization Practices [ACIP]; Part I: Immunization in Infants, Children, and Adolescents. MMWR 2005;54(No. RR-16).]

What Do You Think?



- ❑ How do can I answer questions from parents about vaccines and safety? We don't have a lot of time for discussion during a clinical visit.
 - Give the parent the phone number to the director of CDC to discuss their concerns
 - Go home for headache medication
 - Listen to the parent, answer their questions and recommend vaccination for those without contraindications or precautions

Communication Challenges

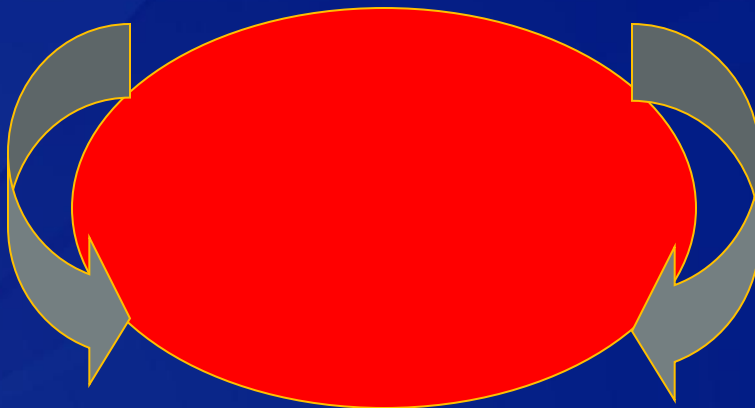
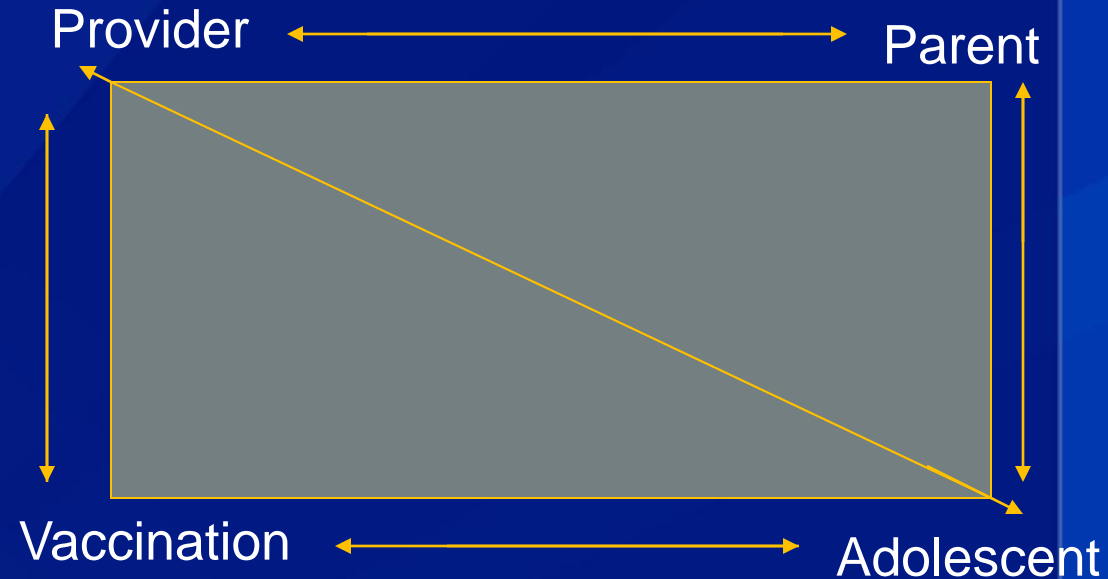
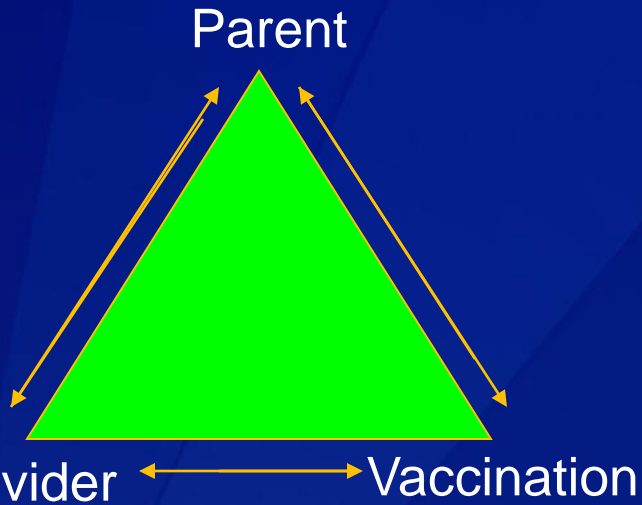
❑ Provider

- Has little time for discussion
- Suffers a sense of rejection as wise advisor

❑ Parent/guardian

- Wants to be heard
- Looking for reliable information
- Wants control; wants to make decision

Each Encounter Takes its Own Shape



Sometimes it can feel like
going around in circles!

Making a C.A.S.E. for Vaccines

- ❑ A model for talking to parents
 - Created by Alison Singer, MD
 - President; Autism Science Foundation
- ❑ A mnemonic to organize a rapid, useful response
- ❑ Lacks published studies of its efficacy
- ❑ Nonetheless draws on communication strategies and principles

Robert M Jacobson, MD. Professor of Pediatrics, Mayo Clinic

Framework for Communicating: C-A-S-E

- ❑ Corroborate: Acknowledge the parents concern;
Find some point on which you can agree;
Validate the emotion.
- ❑ About Me: Describe what you have done to build your knowledge base and expertise
- ❑ Science: Describe what the science says;
Provide accurate, truthful and documented information
- ❑ Explain/Advise: Give advise to parent/patient based on the science



An easy and memorable format for responses helps staff communicate consistent messages about vaccines.

C.A.S.E. Example

□ Corroborate:

- “I understand why you are concerned about safety. We all want medications and vaccines that we give children to be safe.”

□ About Me:

- “Because I have heard this from other people, I have done some research on this subject. I always want to provide the safest care based on the most up-to-date information.”

C.A.S.E. Example

□ Science:

- “Vaccines have been carefully studied by both medical and scientific experts. They are held to very high standard and safety monitoring is done- before and after vaccines are approved and recommended for use. Most side effects are mild- mainly pain and redness at the injection site and this should go away quickly. These diseases can be serious and have severe complications.

□ Explain/Advise:

- “I strongly believe in the importance of vaccination. I have vaccinated my children. Other experts like the American Academy of Pediatrics, infectious disease doctors, and the CDC also agree that vaccination is very important to help keep your child healthy and safe from serious diseases and their complications.”



Provide a clear, strong recommendation for vaccination.

Tips and Time-savers for Talking with Parents about HPV Vaccine

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. For example, you can say “Your child needs these shots today,” and name all of the vaccines recommended for the child’s age.

Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents’ questions helps you save time and give an effective response. CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver.



CDC RESEARCH SHOWS:

The “HPV vaccine is cancer prevention” message resonates strongly with parents. In addition, studies show that a strong recommendation from you is the single best predictor of vaccination.

TRY SAYING:

HPV vaccine is very important because it prevents cancer. I want your child to be protected from cancer. That’s why I’m recommending that your daughter/son receive the first dose of HPV vaccine today.

CDC RESEARCH SHOWS:

Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against.

TRY SAYING:

HPV can cause cancers of the cervix, vagina, and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men. There are about 26,000 of these cancers each year—and most could be prevented with HPV vaccine. There are also many more precancerous conditions requiring treatment that can have lasting effects.

CDC RESEARCH SHOWS:

Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine.

TRY SAYING:

We’re vaccinating today so your child will have the best protection possible long before the start of any kind of sexual activity. We vaccinate people well before they are exposed to an infection, as is the case with measles and the other recommended childhood vaccines. Similarly, we want to vaccinate children well before they get exposed to HPV.

CDC RESEARCH SHOWS:

Parents may be concerned that vaccinating may be perceived by the child as permission to have sex.

TRY SAYING:

Research has shown that getting the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age.

CDC RESEARCH SHOWS:

Parents might believe their child won’t be exposed to HPV because they aren’t sexually active or may not be for a long time.

TRY SAYING:

HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with

www.cdc.gov/vaccines/who/teens/for-hcp-tipsheet-hpv.html



Share communication materials with staff. Keep everyone on the same page!

CDC Vaccines and Immunization Resources

- ❑ Questions? E-mail CDC:

- **Providers**

nipinfo@cdc.gov

- Parents and patients

www.cdc.gov/cdcinfo

- ❑ Website

www.cdc.gov/vaccines

- ❑ Influenza

www.cdc.gov/flu

- ❑ Vaccine Safety

w.cdc.gov/vaccinesafety

Additional Resources

- ❑ Arizona Department of Health Services
www.azdhs.gov/phs/immunization/
- ❑ Local Health Departments
- ❑ Immunization Action Coalition www.immunize.org
- ❑ Vaccine Education Center www.chop.edu
- ❑ American Academy of Pediatrics (AAP) www.aap.org/immunize
- ❑ National Foundation for Infectious Diseases (NFID) www.nfid.org

Best Practice Summary

- ❑ **Immunizing patients is a team effort**
 - Ensure EVERYONE is on the same page
- ❑ **Knowledgeable staff are your best asset**
 - Educate new staff and any temporary staff
 - Annually and update as needed for all staff
- ❑ **Create an environment where staff feel free to ask questions and admit errors**

Questions?



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EXTRA SLIDES